

## عنوان مقاله:

Neuroprotective and Therapeutic Effects of Garlic Extract on Midbrain Dopaminergic Neuron in 6OHDA-Induced Rat Model of Parkinson's Disease

## محل انتشار:

سومین همایش بین المللی التهاب سیستم عصبی و سومین فستیوال دانشجویی علوم اعصاب (سال: 1398)

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## خلاصه مقاله:

Parkinson's disease is an age-related disorder characterized by a progressive degeneration of dopaminergic neurons of Substantia nigra (pc). On the other hand, Garlic Extract is known for its anti-oxidative and anti-inflammatory effects. It also increases important neurotrophic factors of brain such as BDNF and NGF. The aim of this research was to evaluate neuroprotective and therapeutic effects of Garlic Extract on density of dopaminergic neurons in 6OHDA-induced model of Parkinson's disease. Materials and Methods: 30 male Wistar Rats were divided randomly into 3 groups. 6OHDA group: After one week of Normal Saline administration, 6OHDA (80mg/kg) was injected into the left MFB by mean of Hamilton syringe. Neuroprotective group: After one week of Garlic Extract administration, 6OHDA (80mg/kg) was injected into the left MFB by mean of Hamilton syringe. Therapeutic group: After one week of Garlic Extract administration, 6OHDA (80mg/kg) was injected into the left MFB by mean of Hamilton syringe. Administration of Garlic Extract was continued for one week after surgery. Apomorphine-induced rotational test was performed two weeks after 6OHDA injection in order to confirm parkinsonian model. Behavioral tests such as Open field, Rotarod, Hanging and Pole were performed in order to assess the motor impairments four weeks after surgery. Shuttle box test was performed in order to assess the memory six weeks after surgery. Results: It is expected to improve motor impairments and memory in Neuroprotective and Therapeutic groups compared to 6OHDA group. In addition, dopaminergic neurons were increased in Neuroprotective and Therapeutic groups compared to 6OHDA group. Conclusion: After behavioral tests, density of dopaminergic neurons in Substantia nigra were detected and calculated by IHC staining and stereological methods respectively in different groups.

## کلمات کلیدی:

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